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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. |
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09/210,055 12/11/98 MILLER

J 884.055US1

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EXAMINER

HAVAN, T

ART UNIT

PAPER NUMBER

2779

DATE MAILED:

08/17/00

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

## Office Action Summary

Application No.

09/210,055

Applicant(s)

MILLER, JOHN DAVID

Examiner

Thu-Thao Havan

Art Unit

2779

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

### Status

- 1) ☐ Responsive to communication(s) filed on 11 December 1998.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☐ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 9 and 20 is/are allowed.
- 6) ☐ Claim(s) 1, 5, 10, and 16 is/are rejected.
- 7) ☐ Claim(s) 2-4, 6-8, 11-15, and 17-19 is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some \* c) ☐ None of the CERTIFIED copies of the priority documents have been:
1. ☐ received.
2. ☐ received in Application No. (Series Code / Serial Number) \_\_\_\_\_.
3. ☐ received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. & 119(e).

### Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 18) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: \_\_\_\_\_.

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## DETAILED ACTION

### *Drawings*

The drawings in this application are not objected by the Draftsperson.

### *Claim Objections*

Claims 2-4, 6-8, 11-15, and 17-19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 10, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rohlfing et al. (US patent no. 6,034,739).

1. As to claims 1, 5, 10, and 16, the prior art Rohlfing had:

A.) A method comprising modulating the transparency of an image of an object as a function of an angle of incidence of a vector normal to a viewing surface at the surface of the object (**col. 3, lines 49-55; col. 4, lines 20-28, lines 44-52, lines 64-67; col. 2 and 5; fig. 1-4**). Rohling is modulating the transparency of an image of an object when he adjusting in proper measurement

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or proportion to the relative position of the relationships of the objects in the real versus the virtual world. Additionally, Rohling teaches a function of an angle of incidence when he discloses the position and orientation of each item in the virtual environment is modeled relative to a coordinate system selected for modeling. In order for Rohling's system to make a virtual environment then he has to have the function of the angles of each setting or object.

However, Rohling fails to explicitly teach a vector. It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a vector because Rohling teaches a method and apparatus for fixing or anchoring selected virtual elements to positions relative to the physical set (col. 3, lines 49-55; fig. 1-3). Mathematically, Rohling's system has to calculate the vector of the angle to make a virtual world therefore Rohling's system incorporated a vector.

***Allowable Subject Matter***

Claims 9 and 20 are allowed.

The following is an examiner's statement of reasons for allowance: Examiner searching for the steps of (1) assigning a function of  $\theta - \pi$  to  $\alpha$  if the mode is back\_only and comparing  $\alpha$  to zero and (2) a graphics engine capable of running on the processor, generating the image and modulating the transparency of the image as a cosine function of an angle of incidence of a vector normal to a viewing surface at the surface of the object, in combination with the other elements of the claims, was not disclosed by, would not have been obvious over, nor would have been fairly suggested by the prior art of record. The dependent

claims being further limiting to the independent claim, definite, and enabled by the Specification are also allowable.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### *Conclusion*

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Nakamura et al., US Patent No. 5,408,601

Evans et al., US Patent No. 5,764,936

### **Inquiries**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thu-Thao Havan whose telephone number is (703) 308-7062. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Powell can be reached on (703) 305-9703. The fax phone numbers for the organization where this application or proceeding is assigned are (703)308-5359 for regular communications and (703)308-5359 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-9500.

Thu-Thao Havan

August 11, 2000



MARK R. POWELL  
SUPERVISORY PATENT EXAMINER  
GROUP 2700